# CLAIMS

1. A method for determining height parameters that describe a dynamically varying height of an ambulatory subject based on video analysis of the subject, comprising:

acquiring a sequence of images that collectively captures the gait of the subject;

measuring a dynamically varying height function of the subject based on an analysis of the varying height of the subject in the sequence of images; and

fitting the dynamically varying height function of the subject to a model that describes varying height,

wherein the height parameters correspond to parameters used in the model.

2. A method according to claim 1, wherein the model represents an ideal variance in height as a sinusoidal function.

3. A method according to claim 1, wherein the parameters used in the model include a first parameter that describes a baseline height value exhibited by a person in ambulatory motion, and a second value that describes a maximum deviation from the baseline height value.

4. A method according to claim 1, wherein the measuring of the dynamically varying height function includes:

extracting a series of depictions of the ambulatory subject from a larger body of image information contained within the sequence of images;

defining a series of bounding boxes that enclose respective depictions; and

for each of the depictions, determining a distance between a point midway between the feet of the subject and a top of the depiction's associated bounding box.

5. An apparatus for determining height parameters that describe a dynamically varying height of an ambulatory subject based on video analysis of the subject, comprising:

logic configured to acquire a sequence of images that collectively captures the gait of the subject;

logic configured to measure a dynamically varying height function of the subject based on an analysis of the varying height of the subject in the sequence of images; and

logic configured to fit the dynamically varying height function of the subject to a model that describes varying height,

wherein the height parameters correspond to parameters used in the model.

6. An apparatus according to claim 5, wherein the model represents an ideal variance in height as a sinusoidal function.

7. An apparatus according to claim 5, wherein the parameters used in the model include a first parameter that describes a baseline height value exhibited by a person in ambulatory motion, and a second value that describes a maximum deviation from the baseline height value.

8. An apparatus according to claim 5, wherein the logic configured to measure the dynamically varying height function includes:

logic configured to extract a series of depictions of the ambulatory subject from a larger body of image information contained within the sequence of images;

logic configured to define a series of bounding boxes that enclose respective depictions; and

logic configured to, for each of the depictions, determine a distance between a point midway between the feet of the subject and a top of the depiction's associated bounding box.

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